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EDITORIAL DEPARTMENT NOTE

Post-war planning involves more than planning for the transition period between war and peace. It also involves preparation for doing a better job—for the accountant, a better accounting job—in the post-war period. Accounting for installment sales has always provided some difficult accounting problems, and, while there are restrictions on installment credit at present, it is not too early to consider now the things learned in the pre-war period with a view to their application after the war. Mr. Boozer's article, based on actual experience, represents a real contribution to forward thinking in this field of accounting.

Herman W. Boozer, the author of this article, is a New Hampshire C. P. A., who received his academic training at Newberry (S. C.) College and at Pace Institute, New York City. Following his discharge from the Army in 1919, Mr. Boozer entered the employ of the U. S. Treasury Department in Washington, but a year later transferred to Pace & Pace in New York. In 1923 he resigned as Manager of the Technical Department for this firm to accept a position with Peat, Marwick, Mitchell & Co. in Atlanta. Two years later he left his position as Assistant Manager of the Atlanta office for this firm to join the Alabama Power Co. as Assistant General Auditor. Promoted to General Auditor a year later, Mr. Boozer continued this position until 1937 when he joined the Georgia Power Co. as General Auditor. Mr. Boozer was a charter member of the Birmingham Chapter of N. A. C. A. and served as Vice President before moving to Atlanta, where he served as Chapter President for the year 1940-41.

Articles published in the *Bulletin* present many different viewpoints. In publishing them the Association is not sponsoring the view expressed, but is endeavoring to provide for its members material which will be helpful and stimulating. Constructive comments are welcomed and will be published in the Forum Section of the *Bulletin*.

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OCTOBER 15, 1943

THINGS LEARNED IN ACCOUNTING FOR INSTALLMENT SALES OF ELECTRICAL APPLIANCES

By Herman W. Boozer, General Auditor,
Georgia Power Company, Atlanta, Georgia

TO MANY it may appear untimely to talk about installment selling when wartime regulations have greatly restricted the granting of installment credit—particularly about installment sales of electrical appliances, when scarcity of metals and other strategic materials has resulted in regulations practically stopping the manufacture of most electrical appliances. Yet this "pause" in the long-term cycle of installment selling presents an opportunity to do some analytical thinking in preparation for the better handling of installment selling when it is resumed—as it surely will be—after the war is over. This discussion is therefore presented in the hope that others may benefit from some experience I have had.

Background

But before going further, you have a right to know if my experience warrants the expression of any opinions about accounting for installment selling. I will let you judge for yourself, by considering these pertinent data:

My company, Georgia Power Company, is a public utility serving most of the state of Georgia. In order to promote the use of electricity we have always sold electrical appliances—and we have actively merchandised them since 1925. We constitute a large chain-store system, paying the chain-store license tax on 85 stores, because we sell appliances in every office where we transact electric business. During the past ten years, 1932 to 1941, inclusive, we have done a gross sales volume of $26,246,526 in appliances; and after sales allowances for trade-ins and adjustments, the 10-year net sales were $24,866,464. This total consisted of cash sales of 6.3 per cent, open-account sales of 6.7 per cent, and installment sales of 87.0 per cent.

It is from this decade of experience that I speak—embracing the depression lows of 1932 and 1933, and the decade's peaks of 1937 and 1941—our lowest annual sales volume being $1,236,588 in 1932, and our highest being $3,387,404 in 1937. During this decade 73.6 per cent of the dollar volume has been in refriger-

ators, ranges, and water heaters; 45.8 per cent being $12,029,868 for 78,224 refrigerators, 19.4 per cent being $5,083,778 for 48,039 ranges, and 8.4 per cent being $2,210,874 for 26,203 water heaters.

Now, this is not a discussion of sales policies, of profits or losses, of advertising or sales expense, nor of chain-store inventories or warehousing and handling expenses, nor of procedures for billing and collecting. It is a presentation of some things learned from experience, that are not commonly available, knowledge that I have sought in vain from books and articles.

Repossession Experience

First, let us consider the matter of repossessions. Our installment sales are made on a title-retention contract form. We have endeavored to reach the low-income mass market, in a territory of below-average income. Georgia ranks 44th among the states in per-capita income payments to individuals (1940 figures), her per-capita income being only 39 per cent as large as New York's or California's, only 49 per cent as much as Michigan's or Ohio's, and only 56 per cent of the national average. In order to sell in this low-income territory, we have been lenient on credit approval and have provided easy-payment terms. Only in very questionable cases do we spend money for reports from credit reporting agencies—I am talking of individual purchasers, not business enterprises—and we have found it a waste of money to have installment contracts publicly recorded against the average residential purchaser. For refrigerators, ranges, and water heaters, our sale terms in 1932-33 were a down payment of 10 per cent with the balance payable over 18 to 24 months; in 1934-35-36-37 they were nominal down payments with 36 months maturity; in 1938 they were 5 per cent down and 24 months, or 10 per cent down and 30 months; in 1939, 5 per cent down and 30 months, or 10 per cent down and 36 months; and in 1940-41 they were 5 per cent down and 36 months, until the Government restricted terms in September, 1941.

Of course we have had many repossessions—yet relatively small, considering the greatly increased sales of appliances and of electricity resulting from the easy credit policy and long terms. During the ten-year period we repossessed 10,543 refrigerators, 5,986

ranges, and 1,751 water heaters, or a total of 18,280 of these appliances during a period when 152,466 such appliances were sold. Horrible, do you say? But don't jump to a conclusion until you hear the net loss after salvaging the repossessed articles.

Loss on Repossession

Our practice in handling a repossessed article is to repair or recondition it, place a resale price on it, and take it back into stock at an inventory value equal to the resale price less the gross-profit ratio then in effect on similar new merchandise. From stock, it goes out again, when next sold, at the regular mark-up, without any special accounting at the time of resale. To illustrate: if the current gross-profit ratio is 40 per cent of sale price, a repossessed article appraised for resale at $100 will be taken into stock at $60. The repossession loss is the unpaid balance on the original sale, plus the reconditioning expense, less the inventory value at which the article goes back into stock. Our experience in handling all repossessions during the ten years 1932-41 ranges from a net loss of 47.4 per cent to 57.3 per cent of the customer's unpaid balance, averaging 51.5 per cent for the decade, and being 51.2 per cent in 1941. It is uncanny how consistently the net repossession loss runs at about half, or slightly more, of the unpaid balance remaining from the gross sale amount originally charged the customer.

Then what does the unpaid balance amount to at time of repossession? We have the statistics for only the three major appliances, refrigerators, ranges, and water heaters. For repossessed refrigerators the ten-year average unpaid balance was 73 per cent of the original sale price, for ranges 68 per cent, and for water heaters 76 per cent; or for the three combined, 75 per cent. And this figure has not fluctuated much, being 74.3 per cent in 1932, 75.6 per cent in 1937, 73.6 per cent in 1940, and 71.3 per cent in 1941. It seems, therefore, that the average repossessed appliance has an unpaid balance of 75 per cent, which is reduced nearly half by salvage of the repossessed article; and that on repossessions in general the net loss is about 38 per cent of the original sale price of the article repossessed.

Ratio of Repossession to Sales

The next step in our reasoning is to find the per cent repossessed

out of total sold. And that is not simply the ratio of repossessions to sales of the same year! If the critical repossession point is when the customer has 25 per cent equity in his appliance, on the average, it confirms something else we have learned from experience, namely, that most repossessions occur from the 3rd to 8th month after sale. The time-average seems to run about the 6th month. This means that the ratio of repossessions during a calendar year should be computed against sales made during the twelve months ended June 30 of that year. Or, to apply it in a practical manner over a period of years, the ratio of repossessions during a calendar year can be reasonably accurately computed against the *average* sales of the current calendar year and the preceding calendar year. This is what I call the six-months-lag basis—it is more accurate than any other basis I have found—and is the basis used in stating all repossession percentages to sales, in this discussion.

Since experience shows the net repossession loss to be about 38 per cent of the original sale price of the repossesed article, we can anticipate our probable losses and provide reasonable reserves therefor, provided—and this is the big "if"—provided we can forecast fairly closely the number that will have to be repossessed out of each hundred sold. Perhaps ten years of experience furnish at least a clue to the answer.

During this decade the number of repossessions of refrigerators, ranges, and water heaters, and the per cent such number bears to the number sold, computed on the six-months-lag basis, was as follows:

Year	*No. Repossessed*	*Ratio to No. Sold*
1932	1,264	17.5%
1933	833	16.7
1934	839	7.4
1935	1,978	11.3
1936	2,660	13.7
1937	2,937	13.1
1938	2,907	16.7
1939	1,344	11.8
1940	1,637	10.6
1941	1,881	9.4

Causes of Variations

A mere glance discloses that the repossession percentage was not at all constant throughout the ten years; neither was it a defi-

nite trend either for better or for worse. As in all organizations, we have had periods of lenient collection procedure and periods of tighter collection follow-up-periods when our own personnel did all the collection work and periods when it was reinforced by follow-up from collectors of an independent finance company—yet a study of such known periods of greater or lesser collection activity fails to set a pattern that will even approximate the repossession-percentage fluctuations.

One thing I have been able to spot—the reasons for the lower repossession ratio in 1934 and the early part of 1935. That period witnessed the inauguration of our promotional type of electric rate reduction—basically not a reduction in the amount of the customer's bill but an increase in the quantity of electricity he could have for no greater cost to him—which was a great incentive to buy and keep electrical appliances. The year 1934 also saw a lengthening of installment terms from 24 months to 36 months, with refinancing to the longer terms permitted on articles bought earlier on the shorter terms. These factors, in my opinion, definitely account for the 1934-35 deviation in repossession percentage.

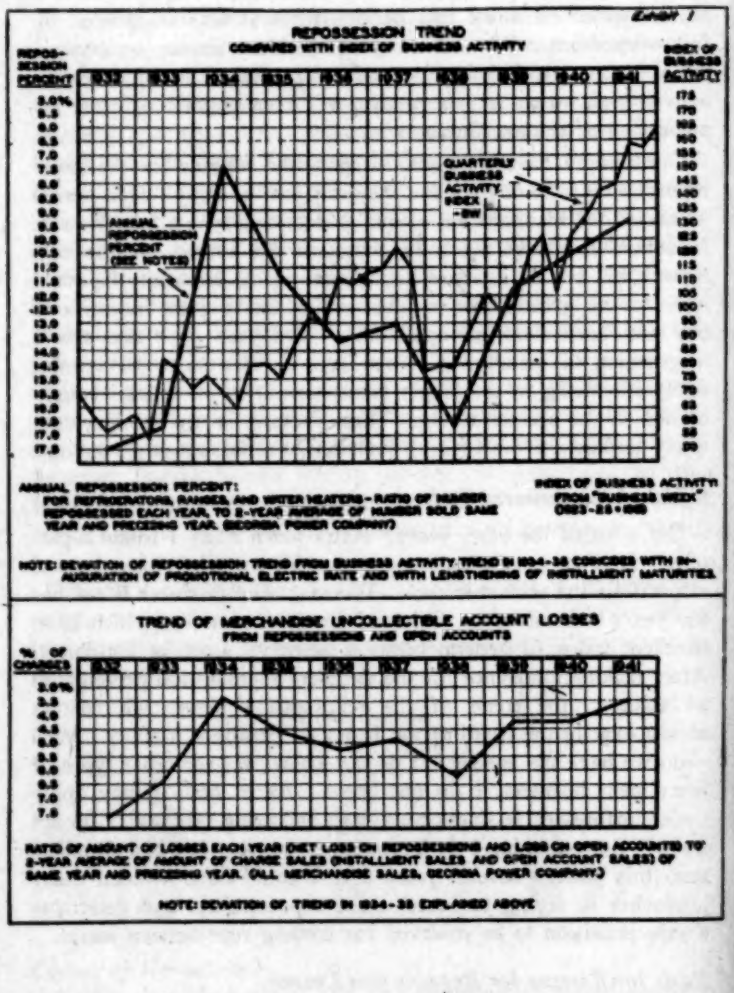
Effect of the Business Cycle

But what of the other years? After much study I found a pattern. That pattern—as perhaps anyone but me might have guessed at once—is the economic cycle. The magazine *Business Week* has for years maintained an Index of Business Activity, which is an excellent index of general business activity. Look at Exhibit 1. After making allowance for the excellent repossession percentages of 1934-35, the trend of the repossession percentage follows almost exactly the trend of the Index of Business Activity. Well—do we have the answer? I do not know. As for other types of installment business, I do not know. As to how it may apply under unforeseen business conditions following this war, I do not know. But one thing I do know in restrospect—if I had stumbled onto this pattern several years ago, I could have avoided many headaches in trying to forecast the repossessions and determine a safe provision to be reserved for coming repossession losses.

Basis for Reserve for Repossession Losses

And what of the required reserve for repossession losses? Is

EXHIBIT 1


REPOSSESSION TREND
COMPARED WITH INDEX OF BUSINESS ACTIVITY
REPOSSESSION PERCENT
INDEX OF BUSINESS ACTIVITY
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
ANNUAL REPOSSESSION PERCENT (SEE NOTE 1)
QUARTERLY BUSINESS ACTIVITY INDEX —BW
ANNUAL REPOSSESSION PERCENT:
FOR REFRIGERATORS, RANGES, AND WATER HEATERS—RATIO OF NUMBER REPOSSESSED EACH YEAR, TO 2-YEAR AVERAGE OF NUMBER SOLD SAME YEAR AND PRECEDING YEAR. (GEORGIA POWER COMPANY)
INDEX OF BUSINESS ACTIVITY FROM "BUSINESS WEEK" 1923-25=100
NOTE: DEVIATION OF REPOSSESSION TREND FROM BUSINESS ACTIVITY TREND IN 1934-38 COINCIDES WITH INAUGURATION OF PROMOTIONAL ELECTRIC RATE AND WITH LENGTHENING OF INSTALLMENT MATURITIES.
TREND OF MERCHANDISE UNCOLLECTIBLE ACCOUNT LOSSES
FROM REPOSSESSIONS AND OPEN ACCOUNTS
% OF CHARGES
RATIO OF AMOUNT OF LOSSES EACH YEAR (NET LOSS ON REPOSSESSIONS AND LOSS ON OPEN ACCOUNTS) TO 2-YEAR AVERAGE OF AMOUNT OF CHARGE SALES (INSTALLMENT SALES AND OPEN ACCOUNT SALES) OF SAME YEAR AND PRECEDING YEAR. (ALL MERCHANDISE SALES, GEORGIA POWER COMPANY)
NOTE: DEVIATION OF TREND IN 1934-38 EXPLAINED ABOVE

it measurable as a percentage of outstanding accounts receivable? The auditor usually checks the adequacy of a reserve for uncollectible accounts by "ageing" the outstanding balances, on the theory that the oldest accounts are the greatest potential losses. But this is definitely not the case with installment accounts covering durable goods—not when experience shows the average repossession occurs in the 6th month when the customer has an equity of about 25 per cent in his appliance. Assuming that installment payments are being made with reasonable regularity, I say that after six months, the older an installment account becomes the safer it becomes. And if most repossessions occur at an average of six months after sale, then the reserve should be measured as a percentage of the amount of sales during the preceding six months and not as a percentage of account balances presently outstanding. Mind you, I do not say the reserve should be measured only by applying the projected repossession percentage to the sales of the preceding six months, but I do say that should be the primary measurement—then double it or do what you wish to provide any desired additional safety factor.

Before leaving the discussion of repossessions, let me point out a peculiarity disclosed by our experience. Year after year our repossession ratio has been highest on refrigerators and lowest on water heaters. The ten-year repossession percentage for the *number* of refrigerators was 14.1 per cent, for ranges 12.7 per cent, and for water heaters only 7.0 per cent. There are several possible explanations; but the most plausible is that there are fewer homes piped for hot water and that those so equipped include the people better able to pay for hot water service, whereas the electric refrigerator for food preservation is more a necessity and is purchased by a greater portion of the people who are financially less able to afford it.

Installment Accounting

Let us look for a few minutes at what it costs to do the accounting for an installment account—the credit investigation, bookkeeping, billing, and collecting.

I should perhaps again state that our credit investigation consists chiefly of personal interrogation of the customer and verification of his employment and average income, with credit agency

reports obtained only occasionally, and that we seldom have a domestic customer's contract recorded. I should also explain that we open a machine-posted ledger card for each account, and send machine-prepared monthly notices of the installment now due (including any arrears amount) to all customers; that all our contracts call for monthly installments to be due on the same day as the customer's monthly electric bill, and we follow the slow-payers with a variety of notices, telephone calls, letters, and visits by collectors, ultimately making necessary repossessions with our own personnel and trucks.

We have one big saving in that the monthly installment notice is inserted in the same envelope with the customer's electric bill, thus averaging a saving of about two cents a month on each account for postage and bill-delivery expense—but I would emphasize that we do not show the installment amount on the electric bill nor do we include it in the total amount of the electric bill—it is payable separately as a mercantile transaction.

Under this procedure we handle not only our own installment-contract and open-account sales, but also the bookkeeping, billing and collecting of electrical appliance installment sales to our electric customers by retailers who finance their contracts through the Government's Electric Home and Farm Authority or through the local bank with whom we finance some of our own contracts. The number of all such accounts (including some refrigerator rental accounts) that were active at December 31, 1941, was 82,670—a large enough number to indicate that our accounting procedure is set up for volume.

The accounting and billing for this huge number of appliance accounts is concentrated in our general office, resulting in efficiency—but the credit, payment-receiving and collecting work is scattered over the 85 stores, with consequent inability to attain maximum economy and efficiency. Our experience in accounting costs is therefore not presented as a low-cost ideal, but solely to aid others in having something with which to compare their costs. In recent years the field-collecting portion of our costs has been helped some through having field adjusters of the Trust Company of Georgia do certain delinquent follow-up work on contracts financed with that institution (contracts of $30 or larger); but the accounts financed with the bank averaged only 5 per cent of

the total number during 1938, 16 per cent in 1939, 26 per cent in 1940, and 36 per cent in 1941—so that such benefit to the field-collecting portion of our costs is rather negligible in its effect on our over-all unit costs.

Unit Costs of Accounting

After these explanations, I present our unit costs. But what is the unit? Bookkeeping and collecting work for installment accounts is proportional to the number of installments maturing each month, since each installment is equivalent to a separate account to be billed, collected, and posted. A thousand such accounts for ten months is 10,000 units—and I designate the unit as the account-month, similar to a man-hour as the time unit for a crew of men at work. Here is our ten-year record of the number of account-months and the average unit cost for billing, accounting, credit and collection expenses:

Year	*Account-Months*	*Unit Cost*
1932	417,957	20.1¢
1933	320,176	21.0
1934	405,758	19.4
1935	564,384	17.6
1936	735,589	15.4
1937	915,244	15.4
1938	968,202	15.2
1939	849,982	15.8
1940	843,717	16.1
1941	892,175	16.2

The rising cost-trend of recent years reflects rising labor costs that have caught up with the normal efficiency trend. For the last three years we have fairly accurately segregated our costs, and find that billing and accounting has a unit cost of 6.9 cents, and credits and collections a unit cost of 9.1 cents, making the three-year average of 16.0 cents per account-month.

From this one can easily see that the accounting and collecting cost is proportionately very high on small installments of $1.00 a month, is a reasonable amount on installments of $5.00 a month, and is proportionately smaller on large installments of perhaps $25.00 a month. This is the reason relatively large finance charges are frequently charged on small-installment accounts—not an indication of exorbitant interest rates—which leads me into the last section of this discussion.

Amortizing Finance Charges

The proper accounting for finance charges on installment contracts—as normally computed on the original balance and included in the initial charge to accounts receivable so as to permit equal installments over a period of months—is a matter often discussed in theory but seldom presented in a practical manner. At least, I have never been able to read anywhere—though it may be in some musty book in a library—about the practical, accurate short-cut procedure I am presenting here. It is not original with me. We obtained it from a large finance company, and doubtless every finance company has a substantially similar procedure. But there are many others who—like me a few years back—would welcome with open arms such a simple practical method of amortizing unearned finance charges over the aggregate lives of installment contracts that will run for various numbers of months.

Finance charges are not earned income of the month in which the installment contract is written. The charge should be made to the customer's account receivable, and a corresponding credit be made to a deferred unearned income account. The problem is, how to equitably distribute or amortize such deferred income into the earned income of future months. The greater the number of installment contracts and the variety of maturities, the greater the problem.

I assume that one would analyze each month's new contracts to assemble the amount of finance charges in respect of each contract maturity. The first possibility is, then, to amortize on the straight-line method of an equal portion to each month in the contract life. But any accountant knows this is wrong, in that it makes no allowance for interest on money invested, the account balance being a decreasing balance comparable to each step in descending a stairway. If, then, we view it as a set of stairs looked at from the side, we visualize the reducing-balance method. When there are great numbers of contracts of many different maturities, ranging perhaps from three-month contracts to thirty-six month contracts, the application of the reducing-balance method in the theoretically-taught manner becomes a huge task for a whole staff of clerks.

Simple Reducing-Balance Method

The task is reduced, though, if we forget decreasing amounts

of balances, forget equivalent interest rates, and find a unit that can be used as a divisor to break up the total finance charge regardless of its amount. If a contract runs for three months, there are three installments outstanding the first six months, two the second, and one the third—three, two, and one—a total of six installment-months or six units in a three-month contract. Whatever the amount of the finance charge, three-sixths applies to the first month, two-sixths to the second, and one-sixth to the third. And similarly for every other contract length. This is the simple reducing-balance method—but still rather laborious to apply when there are contracts of many different maturities.

EXHIBIT 2

REDUCING-BALANCE METHOD AND SHORT-CUT PROCEDURE FOR AMORTIZING INSTALLMENT-CONTRACT UNEARNED FINANCE CHARGES

ILLUSTRATION OF REDUCING-BALANCE METHOD

	1st Mo.	*2nd Mo.*	*3rd Mo.*	*4th Mo.*	*5th Mo.*	*Total*	*No. of Units*	*Per Unit*
	$ .30						1	
2-month contract with 90¢ finance charge (3 units @ 30¢)	.30	.30					2	
	.60	.30				$ .90	3	$.30
	.20						1	
	.20	.20					2	
3-month contract with $1.20 finance charge (6 units @ 20¢)	.20	.20	.20				3	
	.60	.40	.20			1.20	6	.20
	.10						1	
	.10	.10					2	
	.10	.10	.10				3	
5-month contract with $1.50 finance charge (15 units @ 10¢)	.10	.10	.10	.10			4	
	.10	.10	.10	.10	.10		5	
	.50	.40	.30	.20	.10	1.50	15	.10
Sum of 3 contracts	$1.70	1.10	.50	.20	.10	$3.60		

To find No. of Units, add together the installment sequence numbers. (In a 3-mo. contract, installment #1 plus #2 plus #3 equals 6 units.) Divide No. of Units into finance charge to get unit amount. To spread charges for *all contracts of same maturity*, run adding tape of unit amounts beginning with ending month and working back to beginning month, taking subtotal after every item. (In 3-mo. contract above: unit amt. of 20¢ is 3rd mo. income; plus unit amt. of 20¢ gives subtotal of 40¢ as 2nd mo. income; plus unit amt. of 20¢ gives subtotal of 60¢ as 1st mo. income.) When

many different maturities, this is laborious, but is explanatory step to short-cut procedure below:

SHORT-CUT PROCEDURE

Set down the finance charges (total for all contracts of same maturity) by maturities, allowing a line for every month up to longest maturity; divide by No. of Units to get unit amount for each maturity. Thus:

No. of Mos. In Contract	*Finance Charges*	*No. of Units*	*Unit Amount*	*Unit-Amt. Subtotals (Read Up)*	*Income Subtotals (Read Up)*	
1	$ ...	1	$ ..	$.60	1st Mo.	$1.70
2	.90	3	.30	.60	2nd Mo.	1.10
3	1.20	6	.20	.30	3rd Mo.	.50
4	...	10	..	.10	4th Mo.	.20
5	1.50	15	.10	.10	5th Mo.	.10
	$3.60					$3.60

To get income per month:

(1) Run adding tape of *unit amounts*, beginning with last line, and take subtotal for *every* line, thus: 10¢ for line 5; plus nothing for line 4 gives subtotal of 10¢; plus 20¢ for line 3 gives subtotal of 30¢; plus 30¢ for line 2 gives subtotal of 60¢; plus nothing for line 1 gives final subtotal of 60¢. (Shown in second column from right.)

(2) Run adding tape of *unit-amount subtotals*, beginning with last line, and take subtotal for *every* line, thus: 10¢ for line 5 is 5th mo. income; plus line 4 subtotal of 10¢ gives 20¢ for 4th mo. income; plus line 3 subtotal of 30¢ gives 50¢ for 3rd mo. income; plus line 2 subtotal of 60¢ gives $1.10 for 2nd mo. income; plus line 1 subtotal of 60¢ gives $1.70 for 1st mo. income. (Shown in right-hand column.)

Note: Adjust 1st mo. income for any minor difference arising from fractional cents gained or lost in arriving at unit amounts for all maturities.

Refer to Exhibit 2, and analyze the foregoing as illustrated in the upper portion. Then study the short-cut procedure illustrated in the lower portion of Exhibit 2. It consolidates into two adding-machine tapes the entire job of amortizing on the reducing-balance method for a group of varying maturities. All you do is divide by the fixed number of units to get the unit amount for each maturity; run a tape of the unit amounts, beginning with the last and ending with the first; and strike a subtotal for every month represented in the longest contract (which unit-amount subtotals you need not even copy onto your schedule). Next, run a second tape adding the unit-amount subtotals together, beginning with the last and ending with the first, and strike a new subtotal for every month represented in the longest contract. Presto! you have the income from financing charges applicable to each month, beginning with the last and ending with the first. If, in dividing to get the unit amounts, there are fractions dropped or picked

up, merely adjust the first month's income accordingly to make the income-spread agree in total with the total finance charges.

If your amortization schedule is prepared for contracts booked in January, the income earned for the first month is applicable to February, that for the second month is applicable to March, and so on. These months can be written down the right side of the schedule, to avoid mistakes later. A similar amortization schedule will be prepared for the bookings of each month. To find the aggregate amount to transfer into earned income in any month, out of the aggregate deferred unearned finance charges, merely run an adding-machine tape of the amounts labeled for that month, taken from all the amortization schedules.

Two Available Methods Combined

We now have before us two simple and mathematically correct procedures, the reducing-balance method and the straight-line method. Whether the cost of billing and collecting is an insignificant ratio to the amount of the monthly installment—as in automobile financing—the reducing-balance method is the answer, for it makes the amortization on an interest or use-of-money basis. I know of no case where the straight-line method is the sole answer, because the use of money is always a large factor in earning the finance charge. However, there are businesses—such as the financing of installment contracts for electrical appliances, where the cost of billing and collecting is a substantial factor in earning the finance charge—in which it is a substantial ratio to the amount of the monthly installment. In such cases a portion of the finance charge should be spread on the straight-line method, at least enough so that the amount of finance charge assigned to the final month of the contract will cover the billing and collecting cost of the final installment.

In our company we made a study and came to the conclusion that, on the average, half of the finance charges are intended to cover billing and collecting cost. We therefore use an amortization schedule that spreads half on the straight-line method and half on the reducing-balance method. This is illustrated by Exhibit 3. After the finance charges, as booked, are set down, they are divided by two, and the "half" is placed in the second money column; two spreads, one straight-line and the other reducing-

EXHIBIT 3

AMORTIZATION SCHEDULE (HALF-AND-HALF METHOD) FOR INSTALLMENT-CONTRACT FINANCE CHARGES

Month of April 1942

CHARGES BOOKED THIS MONTH (BY MOS. OF MATURITY)			50% ON STRAIGHT-LINE METHOD			50% ON REDUCING-BALANCE METHOD			COMBINED TOTALS	
Mos.	*Total*	*50%*	*No. of Units*	*Unit Amount*	*Income (50%) Subtotals*	*No. of Units*	*Unit Amount*	*Income (50%) Subtotals*	*Income Earned*	*Month Earned*
1	$.....	$.....	1	$....	$ 95.90	1	$...	$170.45	$ 266.35	May 1942
2	.....	.....	2	....	95.97	3	...	148.45	244.42	June "
3	21.00	10.50	3	3.50	95.97	6	1.75	126.73	222.70	July "
4	43.44	21.72	4	5.43	92.47	10	2.17	105.01	197.48	Aug. "
5	83.46	41.73	5	8.35	87.04	15	2.78	85.04	172.08	Sept. "
6	168.88	84.44	6	14.07	78.69	21	4.02	67.24	145.93	Oct. "
7	138.63	69.31	7	9.90	64.62	28	2.48	52.22	116.84	Nov. "
8	169.37	84.69	8	10.59	54.72	36	2.35	41.22	95.94	Dec. "
9	27.18	13.59	9	1.51	44.13	45	.30	32.70	76.83	Jan. 1943
10	23.66	11.83	10	1.18	42.62	55	.22	26.53	69.15	Feb. "
11	.....	.....	11	....	41.44	66	...	20.66	62.10	Mar. "
12	394.76	197.38	12	16.45	41.44	78	2.53	15.01	56.45	Apr. "
13	.....	.....	13	....	24.99	91	...	9.36	34.35	May "
14	.....	.....	14	....	24.99	105	...	6.24	31.23	June "
15	749.58	374.79	15	24.99	24.99	120	3.12	3.12	28.11	July "
	$1,819.96	$909.98			$909.98			$909.98	$1,819.96	

Note 1: To adjust for differences arising from fractions gained or lost in arriving at unit amounts, the income for the first month was reduced 7¢ under "50% on Straight-Line Method" and increased 28¢ under "50% on Reducing-Balance Method."

Note 2: For regular use, a printed form can be designed with lines printed for the maximum number of months that may be needed, and with the number of units printed in the respective columns.

Note 3: In practice, the first division to obtain the 50% (second column) can be obviated by doubling the number of units in each method and dividing the doubled units directly into the total finance charges.

balance, are each worked against the "half," then the two are cross-added to give the half-and-half combined amortization. Exhibit 3 is prepared to show the principle—in practice, we obviate the first division to obtain the "half," merely by doubling the number of units in each method and dividing the doubled units directly into the total finance charges for each maturity.

Adjustments

There is one annoying feature of any plan for amortizing finance charges. It concerns the allowances made to customers for paying out their contracts ahead of time, the adjustments made on returned sales, and the portion of finance charges included in the unpaid balances on repossessed articles. For advance paying-out of a contract the allowance is frequently on a short-rate basis; on a return sale the allowance may be either in full or prorated; and on repossessions the uncollected portion of the finance charge may be stripped from the unpaid balance in some arbitrary manner or in the ratio of the original finance charge to the original amount financed. Whatever the manner of determining these adjustments applicable to unearned finance charges, the problem is how to eliminate them from the unearned amounts already distributed in the amortization schedules. One plan is to assemble all such adjustments according to their remaining unexpired maturities, apply these adjustments according to the respective maturities as offsets to the finance charges booked on new contracts of the current month, and make the amortization schedule for the net difference. An easier way, not as correct, is to determine the ratio of the total adjustments (without assembling them by unexpired maturities) to the total new finance charges booked during the current month, and proportionately scale down the distribution of income to every month on the amortization schedule. Neither of these procedures is accurate; but the amount of such adjustments is relatively small and they only slightly distort the accuracy of the current amortization schedule, while obviating laborious correction of the earlier amortization schedules which embody the finance charges to which the adjustments actually apply.

You have now had mirrored for you some reflections from a few years' experience in accounting for installment sales of elec-

trical appliances. I have merely held several mirrors in a position where you could catch the reflections—one to reflect some aspects of the repossession problem, another to show the cost of installment accounting and collecting, and another to mirror some procedures for amortizing finance charges. I sincerely hope the reflections have been interesting and that they will shed light in the shadows for at least a few of you.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of N. A. C. A. Bulletin, published semi-monthly at New York, N. Y., for Oct. 1, 1943, State of New York, County of New York ss.

Before me a Notary Public in and for the State and county aforesaid, personally appeared R. P. Marple, who having been duly sworn according to law, deposes and says that he is the Editor of the N. A. C. A. Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in Section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, National Association of Cost Accountants, 385 Madison Ave., New York, N. Y. Editor, R. P. Marple, 385 Madison Ave., New York, 17, N. Y. Managing Editor, none. Business Manager, S. C. McLeod, 385 Madison Ave., New York, 17, N. Y.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) National Association of Cost Accountants, 385 Madison Ave., New York, 17, N. Y. President, John H. DeVitt, Hammermill Paper Co., Erie, Pa.. Secretary, S. C. McLeod, 385 Madison Ave., New York, 17, N. Y. Treasurer, Philip J. Warner, Ronald Press Co., 15 E. 26th St., New York, 10, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is.....(This information is required from daily publications only.)

R. P. MARPLE,
Editor.

Sworn to and subscribed before me this 20th day of September, 1943.
(Seal)

IRVING STEINHOLTZ,
Notary Public, New York County,
N. Y. Co. Clk's No. 506, Reg. No. 4S869.
Term Expires March 30, 1944.

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